CLAIMS

1. Magnesium hydroxide characterized in that it is synthesized by the reaction of a magnesium salt and a metal hydroxide.

2. Magnesium hydroxide according to claim 1, characterized in that the magnesium salt and metal hydroxide are reacted in a temperature range of from 10 to 100°C.

3. Magnesium hydroxide according to claim 1, characterized by a particle diameter in a range of from 10 nm to 10 μm.

4. Magnesium hydroxide according to claim 1, characterized by having its surface treated with a reactive silicone.

5. Magnesium hydroxide according to claim 4, characterized by its surface treated simultaneously with its synthesis.

6. Magnesium hydroxide according to claim 4, characterized by having its surface treated with a solution containing the reactive silicone.

7. Magnesium hydroxide according to claim 4, characterized in that an amount of surface treatment is from 1 to 2% by weight.

8. A method of manufacturing magnesium hydroxide, characterized by reacting a magnesium salt and a metal hydroxide.

9. The method of manufacturing magnesium hydroxide according to claim 8, characterized by reacting the magnesium salt and metal hydroxide in a temperature range of from 10 to 100°C.

10. The method of manufacturing magnesium hydroxide according to claim 8, characterized in that the particle diameter of magnesium hydroxide obtained is in the range of from 10 nm to 10 μm.

11. A composite magnesium hydroxide-silica particle characterized in that it is obtained by reacting a magnesium salt and a metal hydroxide in the presence of silica particles.

12. A composite magnesium hydroxide-silica particle characterized in that it is obtained by mixing a dispersion after synthesizing magnesium hydroxide by the reaction of a magnesium salt and a metal hydroxide, and a dispersion after synthesizing silica.

13. A composite magnesium hydroxide-silica particle characterized in that it is obtained by mixing magnesium hydroxide and silica mechanically.

14. A composite magnesium hydroxide-silica particle characterized in that it is obtained by forming magnesium hydroxide and silica into a slurry with a solvent.

15. The composite magnesium hydroxide-silica particle according to claim 11 or 12, characterized in that the magnesium salt and metal hydroxide are reacted in a temperature range of from 10 to 100°C.

16. The composite magnesium hydroxide-silica particle according to any one of claims 12 to 14, characterized by a particle diameter in the range of from 10 nm to 10 μm.

17. The composite magnesium hydroxide-silica particles according to any one of claims 12 to 14, characterized by having its surface treated with a reactive silicone.

18. The composite magnesium hydroxide-silica particle according to claim 17, characterized by its surface treated simultaneously with its manufacture.

19. The composite magnesium hydroxide-silica particle according to claim 17, characterized by its surface treated with a solution containing the reactive silicone.

20. The composite magnesium hydroxide-silica particle according to claim 17, characterized in that an amount of surface treatment is from 1 to 2% by weight.

21. A method of manufacturing composite magnesium hydroxide-silica particle, characterized by reacting a magnesium salt and a metal hydroxide in the presence of silica particle.

22. A method of manufacturing composite magnesium hydroxide-silica particle, characterized by mixing a dispersion after synthesizing magnesium hydroxide by the reaction of a magnesium salt and a metal hydroxide and a dispersion after synthesizing silica.

23. A method of manufacturing composite magnesium hydroxide-silica particle, characterized by mixing magnesium hydroxide and silica mechanically.

24. A method of manufacturing composite magnesium hydroxide-silica particle, characterized by forming magnesium hydroxide and silica into a slurry with a solvent.

25. The method of manufacturing composite magnesium hydroxide-silica particle according to claim 21 or 22, characterized by reacting the magnesium salt and metal hydroxide in a temperature range of from 10 to 100°C.

26. The method of manufacturing composite magnesium hydroxide-silica particle according to any one of claims 21 to 24, characterized in that a particle diameter of the composite magnesium hydroxide-silica particle is in the range of from 10 nm to 10 μm.

27. A method of surface treatment characterized by the surface treatment of magnesium hydroxide or composite magnesium hydroxide-silica particle with a reactive silicone.

28. The method of surface treatment according to claim 27, characterized in that the surface treatment is performed simultaneously with the synthesis or manufacture of magnesium hydroxide or composite magnesium hydroxide-silica particle.

29. The method of surface treatment according to claim 27, characterized in that the surface treatment is performed with a solution containing the reactive silicone.

30. The method of surface treatment according to claim 27, characterized in that an amount of surface treatment is

from 1 to 2% by weight.

31. A resin composition characterized by containing magnesium hydroxide according to any one of claims 1 to 7, or composite magnesium hydroxide-silica particle according to any one of claims 11 to 19 and a resin.

32. A resin composition characterized by containing magnesium hydroxide particle, a silica particle and a resin.

33. The resin composition according to claim 32, characterized in that the magnesium hydroxide particle has its surface treated.

34. The resin composition according to claim 33, characterized in that the magnesium hydroxide particle has their surface treated with stearic acid.

35. The resin composition according to claim 33, characterized in that an amount of surface treatment is from 1 to 2% by weight per magnesium hydroxide.

36. The resin composition according to claim 32, characterized in that the magnesium hydroxide particle is of magnesium hydroxide according to any one of claims 1 to 7.

37. The resin composition according to claim 32, characterized in that the silica particle are of fumed or precipitated silica.

38. The resin composition according to claim 37, characterized in that the silica particle is of fumed silica.

39. The resin composition according to claim 32, characterized in that the silica particle has its surface treated with a methyl group.

40. The resin composition according to claim 32, characterized by containing a total of from 30 to 50% by weight of magnesium hydroxide and silica particle.

41. The resin composition according to claim 40, characterized by containing from 2 to 20% by weight of silica particles.

42. The resin composition according to claim 31 or 32, characterized in that the resin is low-density polyethylene.

43. An electric wire or cable having a sheath layer formed from a resin composition according to claim 31 or 32.